**Amendments to the Specification**

Please amend paragraph [0103] as follows:

The device included a cylindrical vessel, fabricated from polycarbonate membrane, and designed to receive a 12 mm diameter, polycarbonate membrane assembly (Corning ~~Snapwell™~~ SNAPWELL™ P/N 3802) with a pore size of approximately 3 μm. A cylindrical polycarbonate cover could be temporarily inserted into the vessel to form a smaller sample chamber, approximately 1.5 mm high, with a volume of about 160 microliter (μl). A series of bores around the perimeter of the vessel allowed the insertion of three 500 μm diameter optical fibers. The distal tip of each optical fiber was coated with a fluorescent sensing material to form a biosensor.

Please amend paragraph [0113] as follows:

The experimental device described in Example 1 was used to investigate the relationship between cell number and oxygen and $CO_2$ flux rates. Varying numbers ($1.0x10^5 - 4.0x10^5$) of C2C12 myoblasts were seeded on 12 mm diameter polycarbonate membranes (Corning ~~Snapwell™~~ SNAPWELL™) which were then incubated at 37 °C for a period of 12 hours.

Please amend paragraph [0126] as follows:

Materials and Methods: Cell culture reagents were obtained from Gibco BRL (Grand Island, NY). Carbachol was purchased from Sigma Chemical Co. (St. Louis, MO). Bicarbonate-free DMEM medium was obtained from Specialty Media (Phillipsburg, NJ). Polycarbonate membrane ~~snapwells~~ SNAPWELL™s(12 mm diameter, 3 μm pore size) were obtained from Corning (Corning, NY). CHO cells expressing m3-muscarinic receptors (CHO-M3 cells) were obtained from the American Type Tissue Culture (ATCC; Manassas, VA). Cells were cultured in Ham's F-12 medium supplemented with 10% fetal bovine serum (Hyclone), 1% GlutaMax and 0.1%

Gentamicin and were maintained in a 5% $CO_2$ incubator. Cells were subcultured when they reached 80% confluency. CHO-M3 cells were seeded at a density of $2x10^5$ onto a ~~snapwell~~ SNAPWELL™ 24 hours prior to use. Immediately prior to testing, cells on ~~snapwells~~SNAPWELL™ were switched to bicarbonate-free DMEM medium combined with 3.7 g/l NaCl to maintain osmolarity (medium pH 7.4 – 7.5).

Please amend paragraph [0127] as follows:

Protocol Description: Probes were calibrated immediately prior to testing. The bottom of the test vessel was filled with bicarbonate-free medium. The ~~snapwell~~ SNAPWELL™ was removed from a 5% CO2 incubator, and the regular growth medium (Ham's F-12) was replaced with bicarbonate-free DMEM medium. Thereafter, the ~~snapwell~~SNAPWELL™ was placed into the test vessel. Bicarbonate-free medium was pipetted onto the top of the ~~snapwell~~ SNAPWELL™, and the cover piece of the test vessel was placed gently on top of the ~~snapwell~~ SNAPWELL™ and screwed into place, compressing the assembly. The probe software was started, and the pH, $CO_2$ and $O_2$ analytes were measured over the next 3.5 hours. Following the initial 1.5 hours of perfusion at a rate of 78 µl/min, a series of stop flow (10 minutes each) and medium re-perfusion (10 minutes each, 78 µl/min) cycles were started. During the last 2 minutes of medium re-perfusion cycle number 5, 100 µM carbachol was perfused across the ~~snapwell~~ SNAPWELL™. During re-perfusion number 6, bicarbonate-free DMEM medium was once again perfused across the ~~snapwell~~ SNAPWELL™. A rate of change for the analytes was calculated during each stop flow cycle.

Applicants submit the trademark is in fact accompanied by generic terminology.